REPLACEMENT CLAIM SET (WITH CHANGES NOTED)

1) (CURRENTLY AMENDED) A method for deinking waste paper comprising the steps of:

   a) converting the waste paper to a non-alkaline or low alkaline pulp slurry;

   b) contacting the pulp slurry with a deinking blend comprising a first alkoxylated fatty alcohol and a first fatty acid, wherein said deinking blend comprises from about 20 wt.% to about 60 wt.% of said first fatty acid; and

   c) separating ink from the pulp slurry by washing and/or flotation.

2) (ORIGINAL) The method of claim 1, wherein the first fatty acid is non-alkoxylated.

3) (ORIGINAL) The method of claim 1, wherein the first fatty acid is more than 20 wt% fatty acid having at least 16 carbon atoms and less than 60 wt% of saturated fatty acid having 14 carbons or less.

4) (ORIGINAL) The method as in claim 1, wherein the first fatty acid comprises 6 to 20 carbon atoms.

5) (ORIGINAL) The method of claim 1, wherein, in step b), the deinking blend further comprises a second alkoxyated fatty alcohol.

6) (ORIGINAL) The method of claim 5, wherein the second alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

   a) wherein:

   b) R is a straight or branched alkyl group;

   c) n is from about 10 to about 100;

   d) m is from about 1 to about 35; and

   e) said n $-(CH_2\text{-}CH_2\text{-}O)-$ units and said m $-(CH_2\text{-}CH(CH_3)\text{-}O)-$ units are ordered in block or random format in any order or sequence.

7) (ORIGINAL) The method of claim 1, wherein the first alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

   a) wherein:

   b) R is a straight or branched alkyl group;

c) n is from about 5 to about 40;

d) m is from about 0 to about 20; and

e) said n -(CH_2-CH_2-O)- units and said m -(CH_2-CH(CH_3)-O)- units are ordered in block or random format in any order or sequence.

8) (ORIGINAL) The method of claim 7, wherein R is a C6 to C20 alkyl.

9) (ORIGINAL) The method of claim 1, further comprising adding sodium silicate or sodium sulfite or a combination thereof to the pulp slurry.

10) (ORIGINAL) The method of claim 1, wherein separating ink from the pulp slurry is carried out by flotation.

11) (ORIGINAL) The method of claim 1, further comprising adding a flotation additive to the slurry before or during separating ink from the pulp slurry.

12) (ORIGINAL) The method of claim 10, further comprising adding one cationic additive to the slurry before or during the flotation.

13) (ORIGINAL) The method of claim 12, wherein the cationic additive is a cationic polymer.

14) (ORIGINAL) The method of claim 13, wherein the cationic additive is a cationic polyamine.

15) (ORIGINAL) The method of claim 1, wherein the first alkoxylated fatty alcohol comprises at least 5 moles of ethoxylation.

16) (ORIGINAL) The method of claim 1, wherein the alcohol portion of the first alkoxylated fatty alcohol comprises 6 to 20 carbon atoms.

17) (ORIGINAL) The method of claim 1 wherein the pulp slurry in step a) has a pH of from about 6.0 to about 8.8.

18) (ORIGINAL) The method of claim 1, wherein the pulp slurry in step a) has a pH of from about 6.8 to about 7.2.

19) (ORIGINAL) The method of claim 1, wherein the blend is a liquid at a temperature of at least 22 °C.

20) (CANCELED)

21) (CANCELED)

22) (ORIGINAL) The method of claim 1, wherein the first alkoxylated fatty alcohol and first fatty acid are present in a ratio of from about 1:2 to about 2:1 by weight.

23) (CANCELED)

24) (CANCELED)

25) (ORIGINAL) The method of claim 5, wherein the blend comprises alkoxylated fatty alcohol and fatty acid in a ratio of from about 1:2 to about 3:1 by weight.

26) (ORIGINAL) The method of claim 1, wherein the blend comprises water or other diluent.

27) (ORIGINAL) The method of claim 1, wherein the blend comprises from about 0 to about 25 weight % water or other diluent.

28) (ORIGINAL) The method of claim 1, wherein the first fatty acid is a tall oil fatty acid.

29) (ORIGINAL) The method of claim 1, wherein the blend further comprises a second fatty acid, wherein the second fatty acid is an alkoxylated fatty acid of the formula:

$$R^2\text{-}C(O)O\text{-}[(CH_2\text{-}CH_2\text{-}O)_p\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_q]\text{-}H$$

wherein:

a) R^2 is a straight or branched alkyl group comprising at least 6 carbon atoms;

b) p is from about 10 to about 100;

c) q is from about 0 to about 50; and

d) said p $-(CH_2\text{-}CH_2\text{-}O)-$ units and said q $-(CH_2\text{-}CH(CH_3)\text{-}O)-$ units are ordered in block or random format in any order or sequence.

30) (ORIGINAL) The method of claim 29, wherein R^2 is a C6 to C20 alkyl.

31) (CURRENTLY AMENDED) A method for deinking waste paper comprising the steps of:

a) converting the waste paper to a pulp slurry;

b) contacting the pulp slurry with a deinking blend comprising a first alkoxylated fatty alcohol and a first fatty acid, wherein said deinking blend comprises from about 20 wt.% to about 60 wt.% of said first fatty acid;

c) separating ink from the pulp slurry by flotation; and

d) adding at least one flotation additive during or prior to flotation.

32) (ORIGINAL) The method of claim 31, wherein the first fatty acid is non-alkoxylated.

33) (ORIGINAL) The method of claim 31, wherein the deinking blend comprises a first fatty acid that is more than 20 wt% fatty acids having at least 16 carbon atoms and less than 60 wt% of saturated fatty acids having 14 carbons or less.

34) (ORIGINAL) The method as in claim 31, wherein the first fatty acid comprises 6 to 20 carbon atoms.

35) (ORIGINAL) The method of claim 31, wherein, in step b), the deinking blend further comprises a second alkoxyated fatty alcohol.

36) (ORIGINAL) The method of claim 31, wherein the second alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

a) wherein:

b) R is a straight or branched alkyl group;

c) n is from about 10 to about 100;

d) m is from about 1 to about 35; and

e) said n $-(CH_2\text{-}CH_2\text{-}O)-$ units and said m $-(CH_2\text{-}CH(CH_3)\text{-}O)-$ units are ordered in block or random format in any order or sequence.

37) (ORIGINAL) The method of claim 31, wherein the flotation additive is a cationic additive.

38) (ORIGINAL) The method of claim 31, wherein the flotation additive is a cationic polymer.

39) (ORIGINAL) The method of claim 31, wherein the flotation additive is a cationic polyamine.

40) (ORIGINAL) The method of claim 31, wherein the first alkoxylated fatty alcohol comprises at least 5 moles of ethoxylation.

41) (ORIGINAL) The method of claim 31, wherein the alcohol portion of the first alkoxylated fatty alcohol comprises 6 to 20 carbon atoms.

42) (ORIGINAL) The method of claim 31, wherein the pulp slurry in step a) is non-alkaline or low-alkaline.

43) (ORIGINAL) The method of claim 31, wherein the first alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

wherein:

a) R is a straight or branched alkyl group;

b) n is from about 5 to about 40;

c) m is from about 0 to about 20; and

d) said n -(CH_2-CH_2-O)- units and said m -(CH_2-CH(CH_3)-O)- units are ordered in block or random format in any order or sequence.

44) (ORIGINAL) The method of claim 43, wherein R is C6 to C20 alkyl.

45) (ORIGINAL) The method of claim 31, wherein the pulp slurry in step a) has a pH of from about 5.5 to about 12.

46) (ORIGINAL) The method of claim 31, wherein the pulp slurry in step a) has a pH of from about 6.0 to about 8.8.

47) (ORIGINAL) The method of claim 31, wherein the pulp slurry in step a) has a pH of from about 6.8 to about 7.2.

48) (ORIGINAL) The method of claim 31, wherein the blend further comprises a second fatty acid, wherein the second fatty acid is an alkoxylated fatty acid of the formula:

$$R^2\text{-}C(O)O\text{-}[(CH_2\text{-}CH_2\text{-}O)_p\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_q]\text{-}H$$

wherein:

a) R^2 is a straight or branched alkyl group comprising at least 6 carbon atoms;

b) p is from about 10 to about 100;

c) q is from about 0 to about 50; and

d) said p -(CH_2-CH_2-O)- units and said q -(CH_2-CH(CH_3)-O)- units are ordered in block or random format in any order or sequence.

49) (ORIGINAL) The method of claim 48, wherein R^2 is C6 to C20 alkyl.

50) (ORIGINAL) The method of claim 31, wherein the blend is a liquid at a temperature of at least 22 °C.

51) (CANCELED)

52) (CANCELED)

53) (ORIGINAL) The method of claim 31, wherein the first alkoxylated fatty alcohol and first fatty acid are present in a weight ratio of from about 1:2 to about 2:1 by weight.

54) (CANCELED)

55) (CANCELED)

56) (ORIGINAL) The method claim 36, wherein the blend comprises alkoxylated fatty alcohol and fatty acid in a ratio of from about 1:2 to about 3:1 by weight.

57) (ORIGINAL) The method of claim 31, wherein the blend comprises water or other diluent.

58) (ORIGINAL) The method of claim 31, wherein the blend comprises from about 0 to about 25 weight % water or other diluent.

59) (ORIGINAL) The method of claim 31, wherein the fatty acid is a tall oil fatty acid.

60) (CURRENTLY AMENDED) A method for deinking waste paper comprising the steps of:

a) converting the waste paper to a non-alkaline or low alkaline pulp slurry;

b) contacting the pulp slurry with a deinking blend comprising a first alkoxylated fatty alcohol and a first fatty acid, wherein said deinking blend comprises from about 20 wt.% to about 60 wt.% of said first fatty acid; and

c) separating ink from the pulp slurry by washing and/or flotation;

wherein the first alkoxylated fatty alcohol comprises at least five moles of ethoxylation; and

wherein the first fatty acid is a non-alkoxylated C6 to C20 fatty acid.

61) (ORIGINAL) The method of claim 60, wherein the blend comprises a second fatty acid wherein the second fatty acid is an alkoxylated fatty acid.

62) (ORIGINAL) The method of claim 60, wherein the first alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

a) wherein:

b) R is a straight or branched alkyl group;

c) n is from about 5 to about 40;

d) m is from about 0 to about 20; and

e) said n -$(CH_2\text{-}CH_2\text{-}O)$- units and said m -$(CH_2\text{-}CH(CH_3)\text{-}O)$- units are ordered in block or random format in any order or sequence.

63) (ORIGINAL) The method of claim 62, wherein n is 12 to 25 and m is 0.

64) (ORIGINAL) The method of claim 62, wherein the first fatty acid is more than 20 wt% fatty acids having at least 16 carbon atoms and less than 60 wt% of saturated fatty acid having 14 carbons or less.

65) (CURRENTLY AMENDED) A method for deinking waste paper comprising the steps of:

a) converting the waste paper to a pulp slurry;

b) contacting the pulp slurry with a deinking blend comprising a first alkoxylated fatty alcohol and a first fatty acid, wherein said deinking blend comprises from about 20 wt.% to about 60 wt.% of said first fatty acid;

c) separating ink from the pulp slurry by flotation; and

d) adding at least one flotation additive during or prior to flotation;

wherein the first alkoxylated fatty alcohol comprises at least five moles of ethoxylation; and

wherein the first fatty acid is a non-alkoxylated C6 to C20 fatty acid.

66) (ORIGINAL) The method of claim 65, wherein the blend further comprises a second fatty acid wherein the second fatty acid is an alkoxylated fatty acid.

67) (ORIGINAL) The method of claim 65, wherein the first alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

a) wherein:

b) R is a straight or branched alkyl group;

c) n is from about 5 to about 40;

d) m is from about 0 to about 20; and

e) said n $-(CH_2\text{-}CH_2\text{-}O)-$ units and said m $-(CH_2\text{-}CH(CH_3)\text{-}O)-$ units are ordered in block or random format in any order or sequence.

68) (ORIGINAL) The method of claim 65, wherein n is 12 to 25 and m is 0.

69) (ORIGINAL) The method of claim 65, wherein the first fatty acid is more than 20 wt% fatty acids having at least 16 carbon atoms and less than 60 wt% of saturated fatty acid having 14 carbons or less.

70) (CURRENTLY AMENDED) A deinking composition comprising:

a) a first fatty acid that is not alkoxylated and that comprises more than 20 wt% fatty acids having at least 16 carbon atoms and less than 60 wt% of saturated fatty acids having 14 carbons or less, wherein said deinking blend comprises from about 20 wt.% to about 60 wt.% of said first fatty acid;

b) a first alkoxylated fatty alcohol;

c) optionally a second fatty acid that is alkoxylated; and

d) optionally a second alkoxylated fatty alcohol.

71) (ORIGINAL) The composition of claim 70, wherein the first fatty acid comprises from about 20 wt % to about 90 wt % of first fatty acid having at least 16 carbon atoms.

72) (ORIGINAL) The composition of claim 70, wherein the first fatty acid with at least 16 carbon atoms are from about 40 wt % to about 90 wt % unsaturated.

73) (ORIGINAL) The composition of claim 70, wherein the first alkoxylated fatty alcohol has an HLB value of at least 13.

74) (ORIGINAL) The composition of claim 70, wherein the first alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

wherein:

a) R is a straight or branched alkyl group;

b) n is from about 5 to about 40;

c) m is from about 0 to about 20; and

d) said n -$(CH_2\text{-}CH_2\text{-}O)$- units and said m -$(CH_2\text{-}CH(CH_3)\text{-}O)$- units are ordered in block or random format in any order or sequence.

75) (ORIGINAL) The composition of claim 74, wherein n is 10 to 30 and m is less than 10.

76) (ORIGINAL) The composition of claim 74, wherein n is 12 to 25 and m is 0.

77) (ORIGINAL) The composition of claim 70, wherein the composition is a liquid at a temperature of at least 22 °C.

78) (ORIGINAL) The composition of claim 70, wherein the composition comprises an alkoxylated fatty acid, and said alkoxylated fatty acid is of the formula

$$R^2\text{-}C(O)O\text{-}[(CH_2\text{-}CH_2\text{-}O)_p\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_q]\text{-}H$$

wherein:

a) R^2 is a straight or branched alkyl group comprising at least 6 carbon atoms;

b) p is from about 10 to about 100;

c) q is from about 0 to about 50; and

d) said p -$(CH_2\text{-}CH_2\text{-}O)$- units and said q -$(CH_2\text{-}CH(CH_3)\text{-}O)$- units are ordered in block or random format in any order or sequence.

79) (ORIGINAL) The composition of claim 70, further comprising a second alkoxylated fatty alcohol.

80) (ORIGINAL) The composition of claim 79, wherein the second alkoxylated fatty alcohol is of the formula:

$$R\text{-}O\text{-}[(CH_2\text{-}CH_2\text{-}O)_n\text{-}(CH_2\text{-}CH(CH_3)\text{-}O)_m]\text{-}H$$

a) wherein:

b) R is a straight or branched alkyl group;

c) n is from about 10 to about 100;

d) m is from about 1 to about 35; and

e) said n $-(CH_2\text{-}CH_2\text{-}O)-$ units and said m $-(CH_2\text{-}CH(CH_3)\text{-}O)-$ units are ordered in block or random format in any order or sequence.